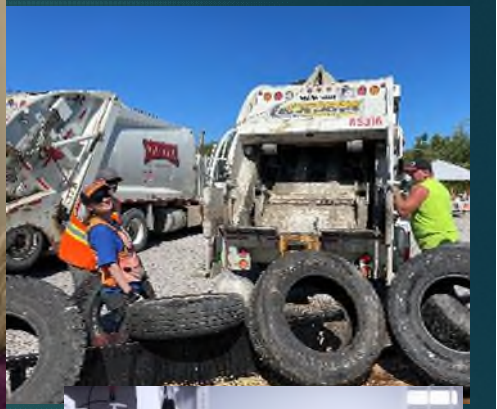
Office of Environmental Quality OEQ

OCTOBER 13, 2021

Office of Environmental Quality

- Adams-Clermont Solid Waste District
  - Waste & Recycling Guidance to the public
  - Recycling program in schools, offices
  - Educational programs
  - Waste Transfer Facility
- Water Resources:
  - CECOS regulatory compliance
  - Wastewater Laboratory, IWPT, and Lease Manager for ESF
  - East Fork LMR Watershed Collaborative



Office of Environmental Quality

- Wastewater master plan and prioritization of water quality
- *County Mission Statement: Take action to begin to manage critical sources of nonpoint source pollution.*
- Become the local experts about water quality

Monitoring Program

- In-house water quality monitoring program to identify priority management areas & assess long term trends
  - CERTIFIED LEVEL 3 CREDIBLE DATA PROGRAM
    - Rigorous QC can be used for regulatory purposes
    - Critical for ability of local data to be used in TMDL, CECOS
    - CERTIFIED PUBLIC LABORATORY

East Fork Water Quality Cooperative

Leverage Resources to Identify, Prevent, & Treat problem

- Federal Partners

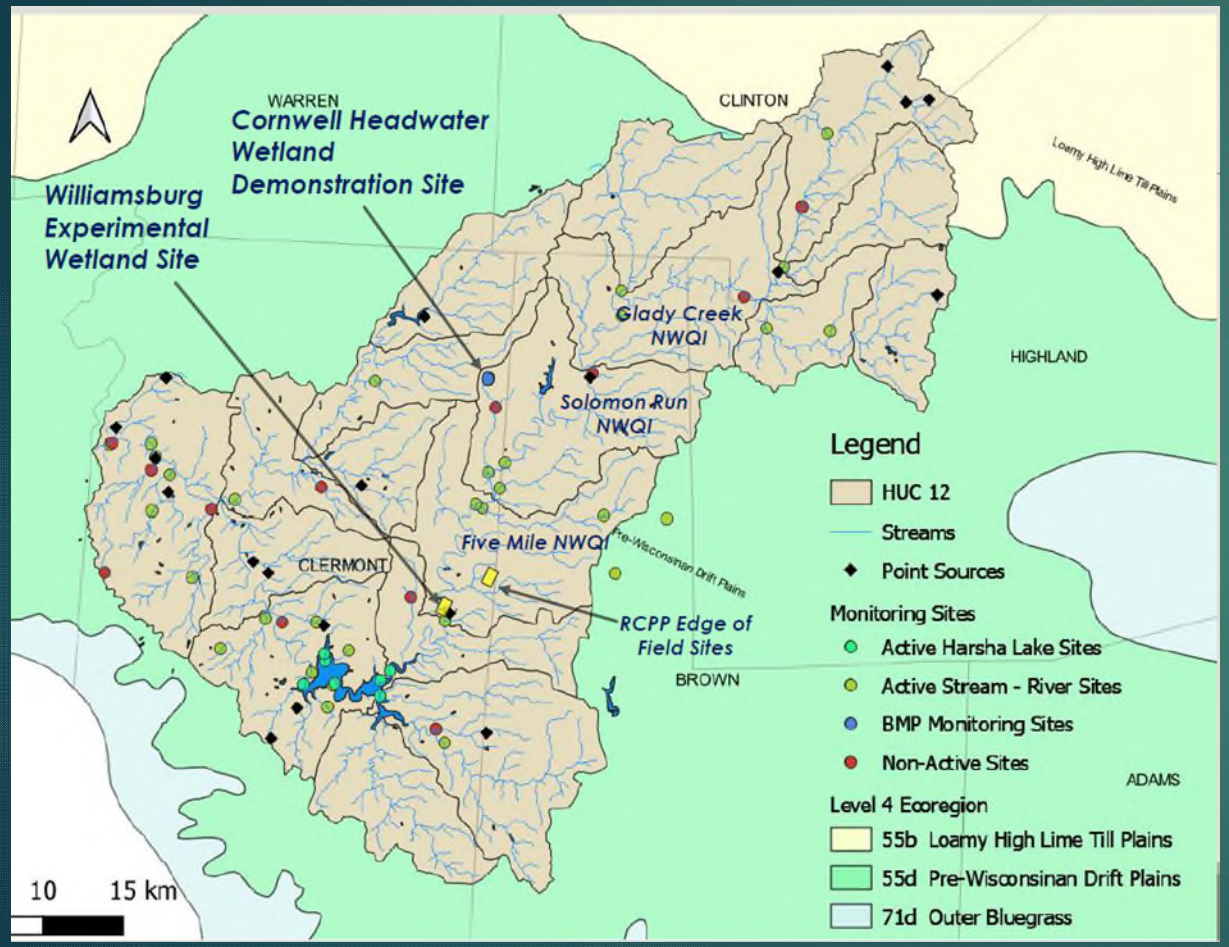
- State Partners

- Local Partners


CLERMONT COUNTY
WATER RESOURCES


+ Local Producers

Water Monitoring & Modeling



Comprehensive monitoring coverage

USEPA developed WQ model populated with local data

1998:

- OEPA enforces CWA
- Determination of attainment assessed every 5 years
- Identify sources of NON-attainment
- TMDL: pollution budget
- EFLMR in non-attainment due to nutrients, sediment, & habitat

Given regulatory flexibility in the TMDL schedule

Our data showed causes of impairment best addressed through non-point source abatement not a traditional nutrient TMDL

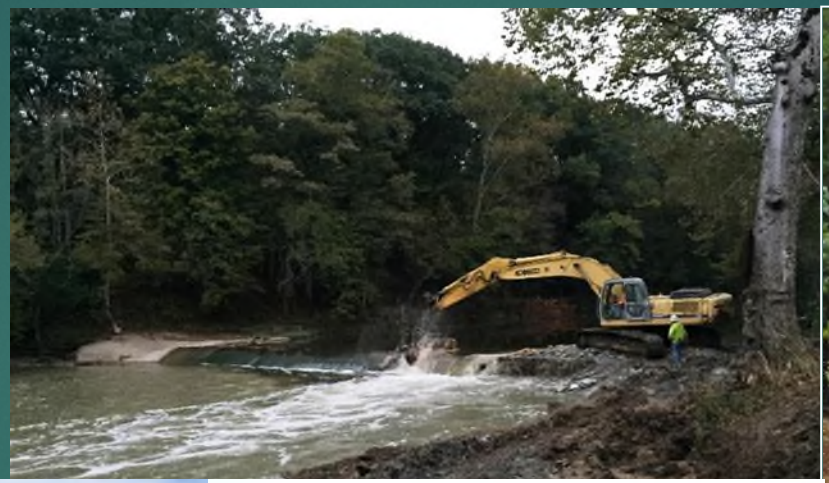
Implementation Phase

- Working on projects to improve stream health
- Multi-agency approach with many partners
- Watershed Management Program
- Watershed Coordinator

East Fork
WATERSHED COLLABORATIVE

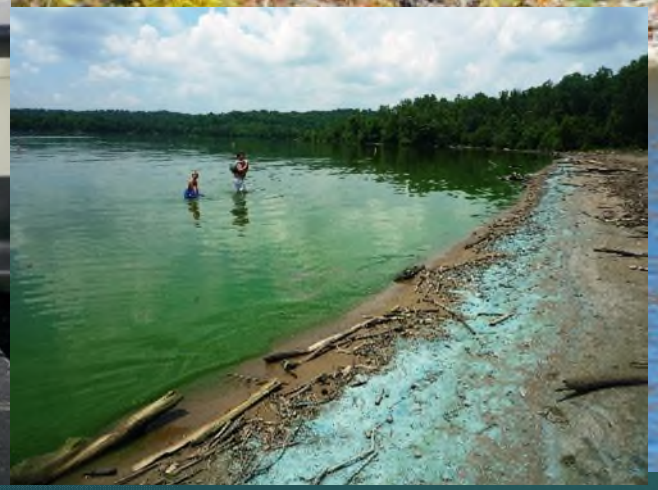
Management Practices

- In-stream restoration
- Bank stabilization
- Riparian corridor protection
- Dam removals



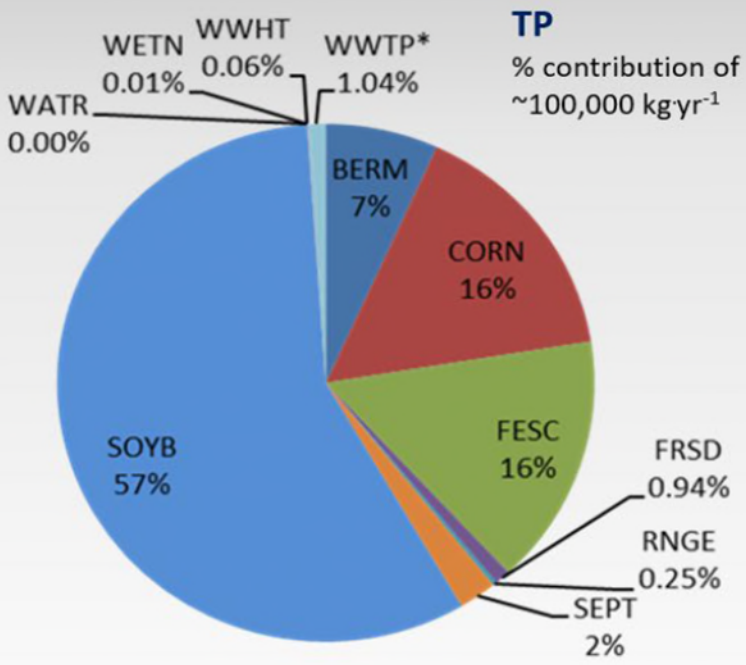
HABS

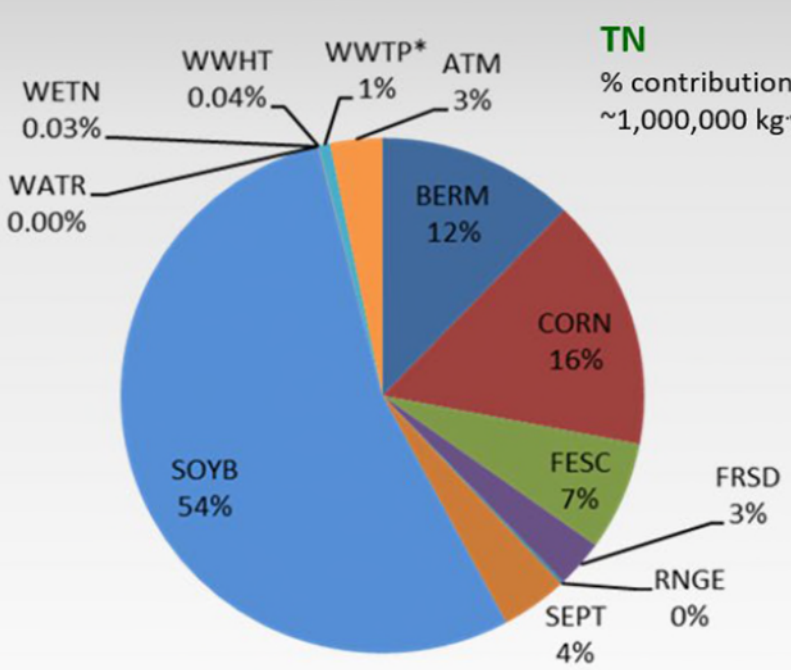
- Harsha Lake Advisories 2013 & beyond
- Recreational & Drinking Water Usage
  - Regional swim meet moved
- Host of National Rowing Championships since 2015
- $2.7 Million annual economic impact



Identifying the Source

Model Output - Nutrient Source Distribution and Reduction Requirements for TMDL Development





Addressing the Nutrient Loads

NEED AG. BMPS

To reduce nutrients to levels prior to HABs:

- 43,000 acres Cover Crops
- 2,600 acres Filter Strips
- 1,040 acres of wetlands

BMP placement

- SWAT Modeling watershed
  - Identify source of nutrient loads at a parcel scale
  - Identifying best locations for BMPs
  - More effective BMP placement!

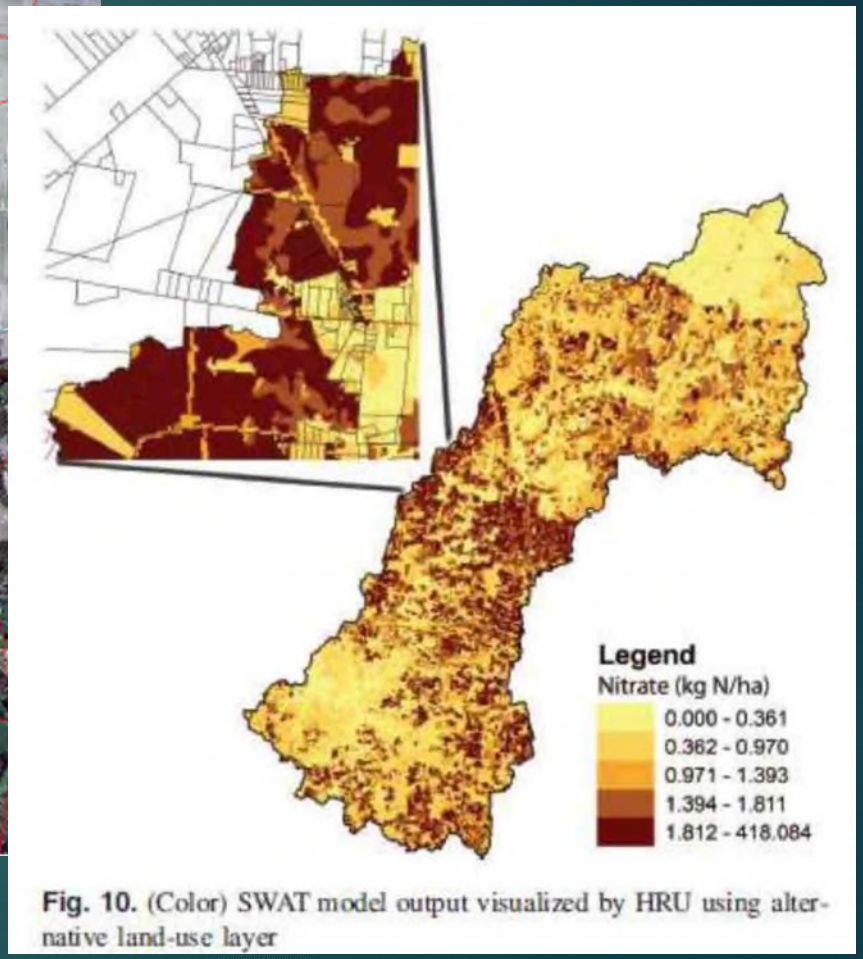


Fig. 10. (Color) SWAT model output visualized by HRU using alternative land-use layer

Source: U.S. EPA Office of Research & Development

Agricultural Practices

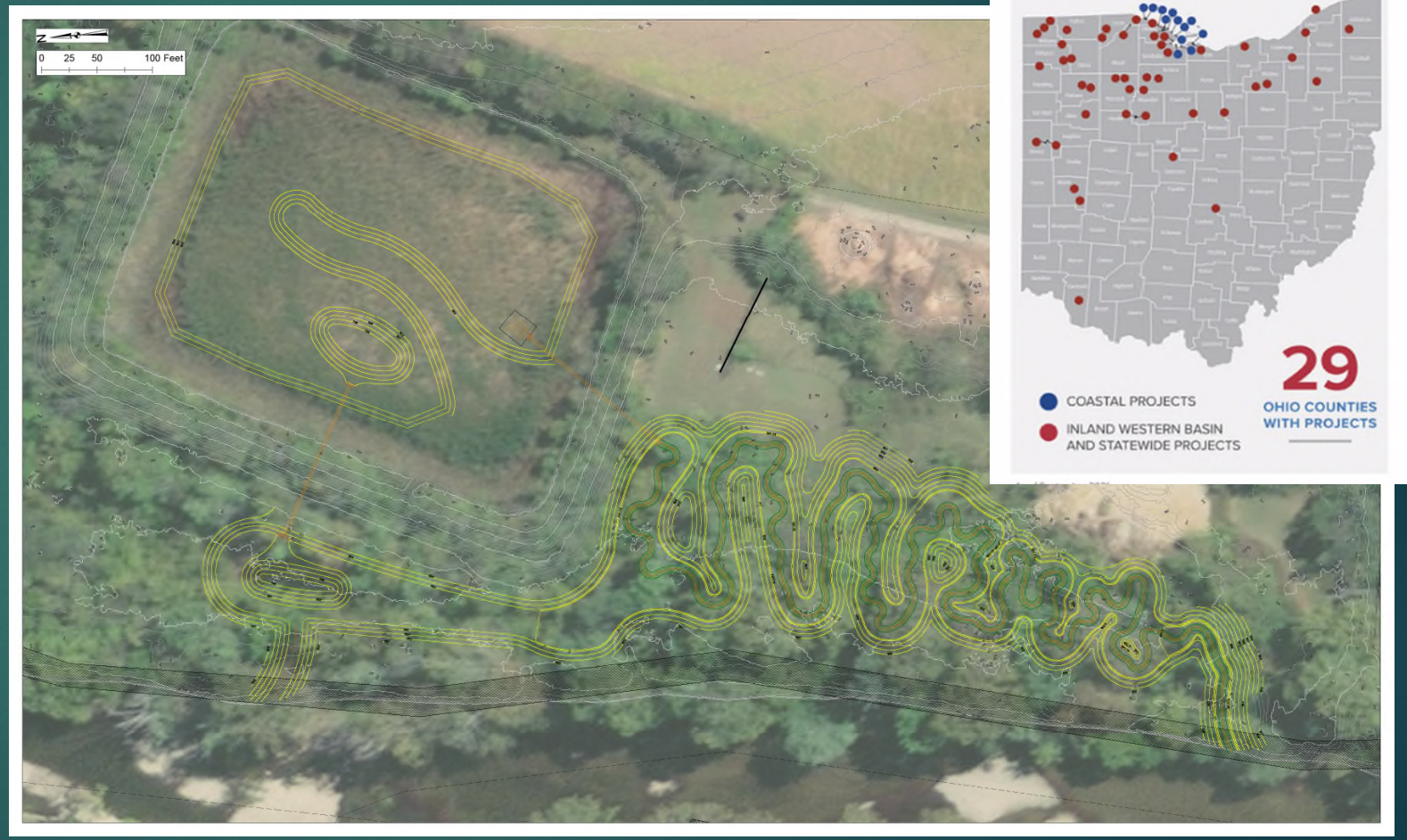
Treatment Wetlands

Submerged Vegetated Bed: Stormwater Design Adapted for Agriculture

- Unique soil types call for unique and untested practices
- Shown to 30% of TN & TP
- Being adopted as a state approved practice

Williamsburg Wetland

- H2Ohio Funding
- Passive/off-channel wetland
- Grant to monitor
- If effective, opportunity for a low cost treatment wetland throughout watershed & state



Nationally Recognized Watershed Program

- Unique partnership with agencies
- Yields access with property owners
- Result is more partners willing to try practices on their properties
- Model enables cost effective placement of BMP
- Vested commitment to showing if practices are working
- Proven track record of implementing programs
- Increased attention yielding more funding

East Fork Watershed Grants Received - 2011 to 2021

Agricultural Grants	Agency	Project	Amount
Conservation Innovation Grant	USDA-NRCS	Cover Crops / Ag BMP	$69,695
Regional Conservation Partnership Program	USDA-NRCS	Cover Crops/ Nutrient Mgt	$367,000
East Fork EQIP Years 1-3	USDA-NRCS	Cover Crops/ Nutrient Mgt	$900,000
National Water Quality Initiative - Five Mile Creek (2013-2019)	USDA-NRCS	Cover Crops/ Nutrient Mgt	$871,722
National Water Quality Initiative - 2021-2023	USDA-NRCS	Cover Crops/ Nutrient Mgt	$426,527
Ag Conservation Menu website	Ohio EPA	Ag BMP one-stop web site	$17,141
Fish Habitat Partnership #1	US Fish & Wildlife Service	Williamsburg wetland, ACPF model	$158,950
Fish Habitat Partnership #2	US Fish & Wildlife Service	Williamsburg wetland	$144,000
H2Ohio	Ohio DNR	Nutrient removal wetlands, ACPF model	$290,000
Reservoirs Program	US Fish & Wildlife Service	Williamsburg wetland	$40,000
Duke Energy Foundation	Duke Energy	Williamsburg wetland	$30,000
Duke Energy Foundation	Duke Energy	HABs and Nitrate Sensing	$23,450
Section 319	Ohio EPA	Williamsburg wetland	$199,960
Harmful Algal Bloom Research Initiative	Ohio DHE	Nutrient removal wetland monitoring	$151,325
Total Ag Grants			**$3,689,770**

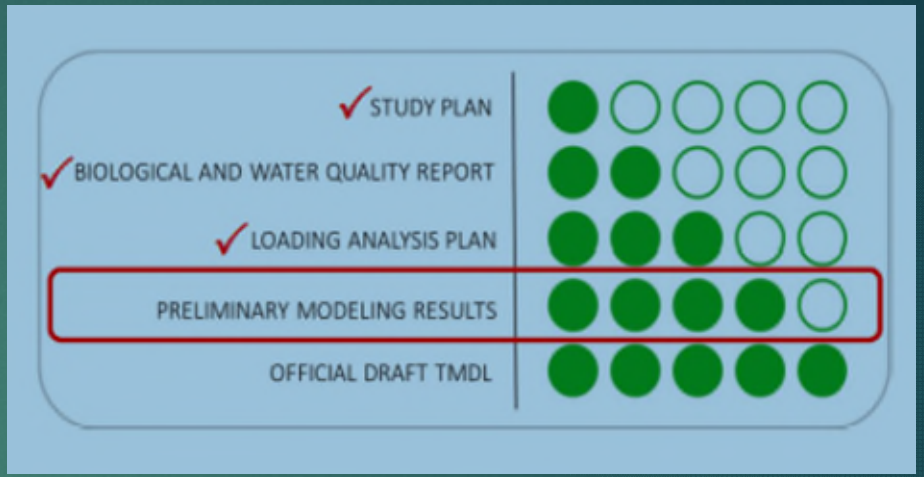
Stream Restoration Grants	Agency	Project	Amount
Water Resource Restoration Sponsorship Program	Ohio EPA	Williamsburg Lowhead Dam Removal	$673,000
Water Resource Restoration Sponsorship Program	Ohio EPA	Batavia Lowhead Dam Removal	$783,000
Fish Habitat Partnership	US Fish & Wildlife Service	Batavia Lowhead Dam Removal	$65,000
Section 319	Ohio EPA	O'Bannon Creek Tributary Restoration	$90,458
Section 319	Ohio EPA	Avey's Run / Shor Park Restoration	$135,080
Water Resource Restoration Sponsorship Program	Ohio EPA	Lower East Fork Restoration	$3,592,784
Total Restoration Grants			**$5,339,322**

Planning Grants			
Section 319	Ohio EPA	Watershed Plan Development	$25,000
SWCD Watershed Program Grant, 2019-2022	Ohio Dept. of Ag	Watershed Project Planning	$155,154
Total Planning Grants			**$180,154**

TOTAL GRANTS RECEIVED, 2011 to 2021 **$9,209,246**

OEPA TMDL

- Follow-up study 2017
- Mainstem lower EFLMR in Full Attainment
  - Likely no nutrient limits in NPDES permits
- Upstream of lake impaired drinking source water
  - Primarily non-point sources of pollution
- OEPA will be using our model for the TMDL
  - Local data used to determine implementation of practices addressing impairment



Point sources in consideration for this TMDL

New Vienna	1PA00005
Lynchburg	1PB00105
Fayetteville	1PD00024
Williamsburg	1PB00034
Newtonsville Area	1PA00106
Snow Hill	1PZ00029

Conclusion

Continue working on securing management practices for the upper watershed to improve water quality in the lake and impairment in the watershed